

## NOTE ON *STOECHOSPERMUM* KÜTZ. (DICTYOTALES, PHAEOPHYTA)

Olivier De Clerck and Eric Coppejans

Laboratory of Botany, Department of Morphology, Systematics and Ecology,  
University of Gent, K.L. Ledeganckstraat 35, 9000 Gent, Belgium.  
Fax: +32 9 264 53 34. Email: olivier.declerck@rug.ac.be / eric.coppejans@rug.ac.be

**ABSTRACT** — *Stoechospermum polypodioides* (J.V.Lamour.) J.Agardh is found to be conspecific with *S. marginatum* (C.Agardh) Kütz. after examination of the type specimen. The anteriority of *Dictyota polypodioides* J.V.Lamour. on *Zonaria marginata* C.Agardh, results in *S. marginatum* to be a synonym of *S. polypodioides*. Additionally all taxa attributed to the genus *Stoechospermum* are typified.

**RÉSUMÉ** — L'étude du spécimen type de *Stoechospermum polypodioides* (J.V. Lamour.) J.Agardh nous fait conclure à sa conspécificité avec *S. marginatum* (C.Agardh) Kütz. Vu l'antériorité de *Dictyota polypodioides* sur *Zonaria marginata*, *S. marginata* est un synonyme de *S. polypodioides*. Les autres taxa appartenant au genre *Stoechospermum* sont également typifiés.

**KEY WORDS:** marine algae, Dictyotales, Phaeophyta, *Stoechospermum*, synonymy, systematics, taxonomy, typification

### RESULTS\*

The genus *Stoechospermum* was erected by Kützting (1843: 339) on the basis of a species from the Red Sea that C. Agardh (1824: 226) had described as *Zonaria marginata*. Kützting noted that apart from the type species *S. marginatum* (C.Agardh) Kütz., *Dictyota polypodioides* J.V.Lamour. (as "*Z. polypodioides* Ag." [the author refers to C. Agardh]) might also belong to the new genus *Stoechospermum*. J. Agardh (1848: 100) eventually made the new combination *S. polypodioides* (J.V.Lamour.) J.Agardh. However, he was not convinced of the identity of *S. polypodioides* and placed the species under "species inquirendae". Subsequently some additional species were added to the genus: *S. macula-*

\* Herbarium abbreviations follow HOLMGREN P.K., HOLMGREN N.H. & BARNETT L.C., 1990 - *Index Herbariorum. I. The Herbaria of the World*, 8th edn. New York Botanical Garden, New York, x + 693 p. [Regnum Vegetabile, vol. 120], and standard forms of author names follow BRUMMITT R.K. & POWELL C.E. (eds), 1992 - *Authors of Plant Names*. Royal Botanic Gardens, Kew, 732 p.

*tum* J. Agardh, *S. patens* Hering ex J. Agardh and *S. suhrri* Kütz. The latter was transferred to the genus *Dictyota* (Papenfuss, 1940: 206-207), and *S. maculatum* and *S. patens* were reduced to synonyms of *S. marginatum* (Zanardini, 1858: 248; Papenfuss, 1976: 27). The status of *S. polypodioides* remained uncertain. Papenfuss suggested that the type specimen of *S. polypodioides*, which he had not examined, almost certainly did not belong to the genus *Stoechospermum*.

Lamouroux (1809: 44) based his original description of *D. polypodioides* on a specimen collected by Thuiller. The type locality mentioned was "Antilles", the Caribbean Sea. Examination of the single specimen in the Lamouroux herbarium (CN), that matches the protologue, revealed that *D. polypodioides* does belong to the genus *Stoechospermum*. The specimen (Fig. 1) is strongly eroded and therefore the typically inrolled apices are lacking, but the elongate marginal sori (Fig. 2) are a typical feature of the genus *Stoechospermum*, absent in all other member of the Dictyotales. The specimen agrees well with what is generally understood under *S. marginatum* (Phillips *et al.*, 1993: 395-398) and there are no reasons to consider *S. marginatum* and *S. polypodioides* as distinct species. There is a problem about the type locality. Lamouroux indicated the Caribbean Sea as type locality but apart from the type specimen no other specimens or records have been mentioned from that region. Examination of a hand written sheet accompanying the type specimen, reveals that Lamouroux was not convinced about the type locality as he wrote "Lieu - Antilles?" (Fig. 3). Therefore we consider the given locality of the type specimen to be very doubtful and the specimen probably comes from the Indian Ocean or Red Sea, although there is no clear evidence for this.

The conspecificity of *S. polypodioides* and *S. marginatum* reduces the latter to a synonym and renders the genus *Stoechospermum* monospecific with a distribution restricted to the Indian Ocean: south east Arabian coast, Australia, India, Kenya, Madagascar, Mauritius, Oman, Pakistan, Red Sea, Somalia, South Africa, Sri Lanka, Tanzania and Yemen. For a complete bibliographic reference we refer to Silva *et al.* (1996: 610-611). Additional to this list, Bali (Indonesia) should be included (Coppejans, HEC 8541 26.vi.1990, Rama Beach Reef, Kuta, Bali). Farrell *et al.* (1993: 150) reported *Stoechospermum* from South Africa (Isipingo, Kwazulu-Natal) where it was also collected by Coppejans (HEC 11011, 23.xi.1995, Mission Rocks, St Lucia, Kwazulu-Natal). To our knowledge this is the only published record of *Stoechospermum* from South Africa, because the syntype locality of *S. maculatum* (J. Agardh 1841: 446) from Cape of Good Hope, did not actually refer to a specimen, but to a drawing of *Zonaria marginata* Suhr (= *Dictyota suhrri* G. Murray) which was tentatively (and erroneously) interpreted by J. Agardh as *S. maculatum*. J. Agardh did never examine the specimen which is clearly stated in a later work (J. Agardh 1848: 97) under "Species inquirendae: *Zonaria marginata* Suhr ... A me non visa.". In conclusion the distribution of *Stoechospermum* in South Africa is restricted to the subtropical north eastern coast.

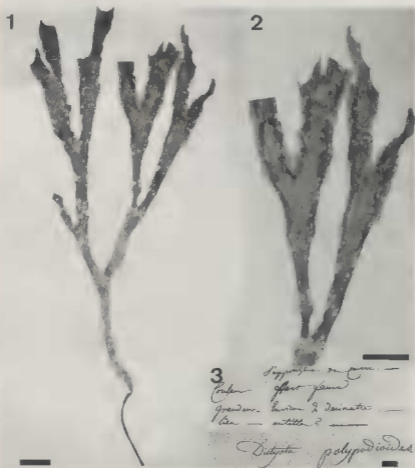
## SYNONYMY

*Stoechospermum polypodioides* (J.V. Lamour.) J. Agardh, 1848: 100.

Holotype: Herb. Lamouroux, locality uncertain, Thuiller, CN C7F103

Basionym: *Dictyota polypodioides* J.V. Lamour., 1809: 44.

Homotypic synonym: *Zonaria polypodioides* (J.V. Lamour.) C. Agardh, 1820: 136.



Figs 2-3. Fig. 1. *S. polypodioides* J.V.Lamour.: holotype. Fig. 2. *S. polypodioides* J.V.Lamour.: detail of the marginal sori of sporangia. Fig. 3. Hand written sheet indicating Lamouroux' doubt on the type locality. Scale bars: 1 cm.

Heterotypic synonyms:

*Dictyota maculata* J.Agardh, 1841: 446-447.

Lectotype: [in mari Indico, ad oras Hindoestaniae], *Wight*, LD 48509. The type collection consists of 2 specimens, both annotated by J. Agardh of which LD 48509 was chosen as a lectotype. The specimens were formerly studied by Papenfuss (1976: 27) but a lectotype was never selected.

*Stoechospermum maculatum* (J.Agardh) J.Agardh, 1848: 99-100.

*Zonaria marginata* C.Agardh, 1824: 266.

Lectotype: ["Ex coll. Forskåhleana", Red Sea fide J.Agardh, 1848: 99], *Forsskål*, LD 48508.

*Dictyota marginata* (C.Agardh) Grev., 1830: xliii.

*Stoechospermum marginatum* (C.Agardh) Kütz., 1843: 339.

*Stoechospermum patens* Hering ex J.Agardh, 1848: 99.

Lectotype: [in mari rubro prope El Tor] Tor, Israel, *Schimper*, LD 48493.

Note: typification of *S. patens* is less evident. J.Agardh based his description on a manuscript of Hering ["Hab. in mari rubro (Un. itinerar. sub n° 473)"]. The Unio Itineraria was a society for the promotion of natural history travel established by Steudal and Hochstetter in Esslingen (Papenfuss, 1968: 4). Specimens were collected by Schimper principally at El Tor, Nuweiba, Jiddah and Kosseir, identified by Hering and Martens and distributed to several phycologists. LD 48491, 48492, 48493, 48493 all correspond more or less to the original description of *S. patens* as they were all collected in the Red Sea. Among these LD 48493 is hereby chosen as a lectotype. But it should be noted that the "n° 473" was not retrieved in the Agardh Herbarium.

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